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Evaluating a peer-based visitation model as a developmental quality assurance strategy in Dutch physiotherapy practices: a mixed methods study

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Abstract (max 350 woorden)

Background: Peer visitation is a quality improvement strategy that combines formative and summative quality indicators and is increasingly positioned as a developmental intervention that aims to reconcile accountability with learning and improvement. It is conducted by colleagues who are educated in their visitor's role. In recent years, peer visitation is implemented in Dutch primary care physiotherapy practices. However, empirical evidence on how peer visitation is enacted in everyday practice, and under what conditions it fosters learning and improvement remains limited.

Aim: To evaluate the peer visitation model of a Dutch quality registry for primary care physiotherapy practices, and to explore the improvements needed to meet its ambitions for learning and improvement.

Methods: Mixed-methods study integrating four data sources: 1) visitation documents; 2) non-participant observations of six site visits; 3) semi-structured interviews with 20 stakeholders (practice owners, quality officers, observing practices and visitors); and 4) a nationwide cross-sectional survey among all stakeholders involved in peer visitation, differentiating four stakeholder roles: physiotherapist, practice owner, quality officer, and visitor. Observation notes, interview transcripts, and survey comments were analysed using reflexive thematic analysis. Survey data were analysed descriptively and compared across stakeholder groups.

Results: Observations showed that visitation was largely delivered according to formal guidelines, but that time was predominantly devoted to process- and outcome indicators, leaving limited time for formative dialogue and sensemaking. Four visitor roles were identified—coach, analyst, connector and controller—which were decisive for the learning potential of visitation.

Interviews revealed four interrelated themes: data use between accountability and learning; quality culture and psychological safety; practice diversity and the need for differentiation; and explicit and implicit learning mechanisms. Visitation was primarily valued as a reflective learning opportunity rather than as a summative assessment. However, the combination of formative dialogue and summative judgement created tensions between 'using data for compliance' and using 'data for learning and improvement'. Moreover, the results revealed the need for tailoring visitation to learning needs and practice maturity.

The survey results showed substantial variation among stakeholder groups regarding the learning value of peer visitation. Across all groups, meaningful use of data for collective learning and improvement was limited.

Conclusions: Peer visitation can enable learning if governance choices protect psychological safety, rebalance summative and formative elements, and provide feedback loops that demonstrate how data are used. These implementation lessons allow for the transfer to other primary care contexts seeking to shift from audit to learning.

Keywords: peer visitation; peer review; audit and feedback; psychological safety; quality culture; governance; primary care; physiotherapy; mixed methods

Background

Peer visitation is a quality improvement strategy that combines formative and summative quality indicators and is increasingly positioned as a developmental intervention that aims to reconcile accountability with professional learning. It is conducted by colleagues who are educated in the visitor's role. In recent years, peer visitation has been implemented in Dutch primary care physiotherapy practices. However, empirical evidence on how peer visitation is enacted in everyday practice, and the extent to which its ambition to foster learning and improvement is realised, remains limited.

External quality assurance systems such as accreditation, audit, inspection and performance measurement are central instruments of healthcare governance. They are intended to provide assurance to regulators, payers and the public, but the literature shows that compliance-oriented approaches can narrow attention to what is measurable, encourage gaming, and inhibit openness and learning (Bevan & Hood, 2006; Mannion & Braithwaite, 2012). Clinicians might feel threatened rather than supported by top-down feedback and question whether rewards outweigh efforts invested in poorly designed audit (Foy et al., 2020; Endalamaw et al., 2024).

Peer-based approaches aim to reposition quality assessment as a formative process embedded in professional communities (Maas et al., 2017). Such models are conceptually aligned with learning health systems where routinely collected data are used to generate knowledge and drive continuous improvement through quality cycles, feedback loops and appropriate governance (Foy et al., 2025; Friedman et al., 2024; Mc Donald et al., 2022).

In the Netherlands, the Association for Quality in Physical Therapy (SKF) is a quality registry for physiotherapy practices in primary care (PTP's). It aims to improve physiotherapy services and contribute to a learning health system by systematically collecting, analysing, and feeding back process – and outcome data from daily practice. By sampling these data across many practices, the registry builds a large, real-world dataset allowing for data-driven quality improvement and research.

The peer visitation model for Dutch PTP's in primary care, was developed in 2024. It assesses practice organisation and quality management using a structured programme. The model combines summative indicators (determining whether minimum requirements are met) and

formative indicators (intended to stimulate reflection and improvement). Appendix 1 table 1 presents the phases in the visitation process and table 2 shows the quality criteria and associated indicators. Visitors are physiotherapists (peers) educated in their visitators role. According to the systematic review by Ivers et al. (2012), the effectiveness and implicit acceptance of audit and feedback interventions are significantly enhanced when the feedback is delivered by a a peer/colleague, rather than an external authority. Healthcare professionals are more receptive to performance data when it originates from a trusted local source within their professional hierarchy or immediate clinical environment.

PTP's prepare visitation with a survey and a reflection report on quality criteria and indicators. The visited PTP invites another PTP to observe the visitation process, aiming for collaborative learning from multiple perspectives.

Aim: To evaluate the implementation, experiences, and learning potential of the peer visitation model of a Dutch quality registry for primary care physiotherapy practices, and to explore which conditions are needed to strengthen its learning and improvement function.

Our research questions were: (1) Is visitation delivered as intended? (2) How do visited practices, observing practices, visitors and staff experience the visitation model?

Methods

Design

We employed a sequential exploratory mixed-methods study integrating four data sources: 1) visitation documents; 2) non-participant observations of six site visits; 3) semi-structured interviews with 20 stakeholders (practice owners, quality officers, observing practices and visitors); and 4) a nationwide cross-sectional survey among stakeholders involved in peer visitation (Palinkas et al.; 2019). This study was conducted in the Netherlands from April – February 2025. We adhered to the guidelines for mixed methods research and qualitative research (COREQ).

Data sources

Document analysis

Documents on visitation (e.g., visitation guide, indicator sets, standardized assessment forms, and visitation reports were provided by SKF and the external organisation that coordinates the peer visitation process and links visitors (physiotherapists educated in visitation) to PTP's. The authors MM and MH studied the documents to answer the first research question: is visitation implemented as intended?

Observations

PTP's were recruited from those scheduled for visitation during the study period by the external organisation. They received an information letter including an informed consent. Linked visitors were similarly recruited.

Semi-structured Interviews

PTP's who consented to participate were also invited for semi-structured interviews after visitation. We aimed for a maximal variation sample including all stakeholders involved in the visitation process (employees, practice owners, quality officer, and visitors. Interviews lasted 45–60 minutes and were conducted onsite or online using an interview guide from April to Oktober 2024. All interviews were audio-recorded and transcribed verbatim. Transcripts were imported in Atlas-ti software version 24.0. Interviews were conducted until data were saturated and no new information was obtained.

Nation-wide Survey

For the purpose of this study, a 36-item survey, adapted from Nardi et al. (2023) was developed, based on the results of the interviews, and distributed to SKF members in November 2024–January 2025. It included five domains (knowledge, attitude, behaviour, results, and conditions) that could be scored on a 5-point Likert scale and an open field for written comments. Items were tailored to four participant roles or role combinations: physiotherapist, practice owner, quality officer, visitor. Questionnaire items (including results) are presented in Appendix 2. SKF members received a link to the survey via email by research assistant JC. JC collected and anonymized the survey results and imported the quantitative data into IBM SPSS Statistics.

Analysis

We interpreted the findings through lenses of quality culture and psychological safety, recognising that learning under evaluative conditions depends on whether people feel safe to speak up and discuss weaknesses (Edmondson, 1999; Montgomery et al., 2025).

Qualitative data, comprising observation notes, interview transcripts, and written comments, were analysed using Atlas-ti version24 and reflexive thematic analysis (Braun & Clarke, 2019), informed by Consolidated Criteria for Reporting Qualitative Research (COREQ). Relevant text fragments from the first two transcripts were independently coded by MM and MH. The codes were then compared and discussed, and a coding scheme was developed. All transcripts were coded accordingly. Through iterative discussion and comparison of codes, patterns were identified, and the data were progressively condensed by merging related codes into higher-order categories. The preliminary findings were discussed with PW, who was not involved in the data sampling process, to critically reflect on the interpretation of the findings regarding the research question and existing literature. MM subsequently developed themes that were aligned with the research questions and grounded in the data. The themes were illustrated with representative quotes from participants.

Quantitative survey data were analysed with descriptive statistics and analysis of variance (ANOVA),with Bonferroni post-hoc tests to examine differences across respondent roles.

Triangulation

We developed a joint display to triangulate findings from the four data sources. The joint display synthesised the themes identified through the qualitative interview analysis with findings from document analysis, observations, and the questionnaire. We examined the extent to which findings converged, complemented one another, or provided divergent perspectives.

Based on the integrated findings, we formulated recommendations to support SKF in strengthening the learning potential of peer visitation in line with its learning ambitions.

Ethics and reflexivity

The primary researchers were MM, an assessment and feedback scientist, and PvdW, an implementation scientist. Given that SKF commissioned the study, close collaboration with SKF was required to facilitate the study design and conduct. SKF was involved in discussing and refining the study design, facilitating participant recruitment, providing relevant visitation

documents, and contributing to the development and administration of the survey among SKF members. This involvement was intended to ensure the relevance and feasibility of the study and did not extend to the analysis or interpretation of the study findings.

To minimise the risk of conflicts of interest and potential bias, SKF had no role in the quantitative data analysis, qualitative data interpretation, or triangulation of findings. Its involvement in the qualitative analysis was limited to the practical facilitation of the study and did not include decisions about coding, theme development, or interpretation. Preliminary findings were discussed within the research team, including PW, who had not been involved in data collection, to support critical reflection on the interpretation of the findings.

Recommendations concerning SKF's learning ambitions for peer visitation were developed by critically reflecting on the integrated study findings collaboratively with SKF to consider their implications for policy and practice. SKF's contribution at this stage concerned the interpretation of the implications and feasibility of the recommendations, rather than modification of the underlying study findings.

All methods were performed in accordance with the relevant guidelines and regulations, including the Declaration of Helsinki. The study was approved by the Medical Ethics Review Committee METC Oost-Nederland (file no. 2024-17239). Informed consent was obtained from all participants prior to their participation in the quantitative survey and qualitative interviews.

Results

Six of the 19 invited PTP's consented to observation during site visits (5 x 6 hours and 1 x 4.5 hours) and interviews afterwards. Thirteen PTP's declined because of time constraints or the perceived burden of an extra audience. Six out of these 13 PTP's agreed to only interviews. Table 3 shows details on observations and interviews.

Table 3. Characteristics of observed practices and interviews

Data source	Unit of analysis	Region	Number of staff	Duration
Observation	PTP 1 (P1)	North Holland	7–12	6 hours

Observation	PTP 2 (P2)	South Holland	7–12	6 hours
Observation	PTP 3 (P3)	Drenthe	7–12	6 hours
Observation	PTP 4 (P4)	North Holland	7–12	6 hours
Observation	PTP 5 (P5)	Utrecht	7–12	6 hours
Observation	PTP 6 (P6)	Utrecht	<7	4.5 hours
Interview	Visited PTP owners / quality officers (n = 13)	Various	—	10–13 hours
Interview	Observing PTP owners / quality officers (n = 3)	Various	—	2.5–3 hours
Interview	Visitors (n = 4)	Various	—	3–4 hours

Notes:

Observation duration was adjusted to practice size. Interviews were conducted either immediately after the visitation or the following week via video conferencing. No additional interviews were required as data saturation was achieved.

Research question 1: Is peer visitation conducted as intended?

(Document analysis and direct observation)

Analysis of visitation documents and direct observations showed that the peer visitation programme was largely implemented according to its formal design, but with notable variation in execution across practices and visitors. Core quality domains were systematically addressed. However, narrative feedback varied in scope, depth, and alignment with learning needs, and the emphasis during visitations frequently shifted towards compliance to summative indicators leaving little time for formative indicators and reflective dialogues with observing practices challenging the visitation aims.

Observations also revealed differences in how visitors interpreted their role. We identified four overlapping visitor roles: *coach* (process-based approach, encouraging reflection and addressing specific learning needs), *analyst* (analytical approach, promoting in-depth interpretation of data and systems), *connector* (helping approach, demonstrating empathy, helping to link current practice to SKF's broader quality vision and sector developments), and *controller* (assessment

approach, checking indicators in a compliance-oriented manner). Practices experienced visitors that took the coaching and the analyst role as enabling learning, while controlling behaviours tended to narrow dialogue to meet norms.

Taken together, these findings suggest that peer visitation is implemented as intended, but that its learning-value can be improved.

Research question 2 What are the experiences of visited practices, observing practices and visitors?

Interview results

A total of 20 participants were interviewed after visitation: 13 PTP owners and/or quality employees, 3 PTP's that participated as visit observers, and 4 visitors. Interviews lasted on average for one hour (Table 3).

The findings are structured around four interrelated themes. Together, these themes show how visitation functions simultaneously as a control-oriented assessment and a learning-oriented intervention, with both explicit and implicit learning processes occurring. Overall, experiences with peer visitation were predominantly positive across stakeholder groups, particularly collegial exchange and reflection. Across themes, participants consistently pointed to concrete areas for improvement, including competency development of visitors, differentiating visitation intensity based on practice maturity, clarifying the balance between summative and formative elements, and improving feedback loops on data use.

Theme 1. Data use between accountability and learning

Data collection emerged as a central element of the visitation process although perceptions varied. Participants described both externally driven motivations (e.g. contractual requirements and financial incentives) and intrinsically motivated use of data aimed at improving care delivery.

Some respondents viewed summative indicators as necessary to safeguard minimum quality standards, while others experienced these indicators as producing stress and directing behaviour towards compliance rather than improvement:

"....People feel they are being judged on the numbers, rather than supported in improving care." (V1 Visitor)

Several practices reported that data were collected primarily "because it is required," with limited reflection on meaning or interpretation. In contrast, other practices described deliberate choices in measurement instruments and active use of data for shared decision-making and practice-level evaluation:

"We use more with data since the visitation. Not just collecting data but in fact discussing what they tell us about our patients and our practice." (P2 Practice owner)

However, concerns were raised about the validity and reliability of data and data reports, as well as about unintended effects such as *gaming behaviour*, where meeting indicator thresholds becomes the goal rather than improving care quality. In addition, practices need more feedback from the SKF regarding the use of data for knowledge development, professional positioning, and research.

"Until now, the focus has been on the data collection process, where we as a practice have achieved a great deal. However, [...] I'm missing feedback on what happens with the data and what it brings to us as healthcare providers." (P4 Practice owner)

Overall, the meaningful use of data for learning and quality improvement, e.g. comparing patient outcomes on specific conditions with benchmarks, was limited challenging the ambition of SKF to contribute to a learning health system.

Theme 2. Quality culture and psychological safety

Participants described quality culture not only in terms of formal structures, but also as shared norms regarding openness, feedback and mutual accountability, which directly shaped the extent to which visitation was experienced as a learning opportunity. In practices with an established quality infrastructure, staff were actively involved in visitation preparation, reflection on outcomes and improvement planning. In other practices, particularly those with high staff turnover or many self-employed professionals, commitment to quality processes was more fragile. Observations revealed that psychological safety was not always fully safeguarded, especially during staff interviews conducted in the presence of practice owners.

"If the practice owner is present, people may not feel free to speak openly. That undermines the idea of learning in a safe environment." (Researcher observation)

This theme showed that a staff involvement in visitation, a shared quality culture, and psychological safety was not self-evident.

Theme 3. Differentiation, tailoring and practice diversity

Interviewed visitors emphasised that practices differ widely in maturity, organisational capacity and prior experience with quality systems. Newer or less developed practices required more guidance and coaching, whereas practices with established quality cycles benefitted more from reflective, forward-looking dialogue.

"Once the basics are in place, the conversation can move beyond ticking boxes and really focus on where the practice wants to go." (V3 Visitor)

Respondents advocated for greater differentiation in visitation intensity and format, a finding that directly informed later recommendations.

Theme 4. Learning through visitation: explicit and implicit mechanisms

Although visitation was often initially perceived as a control mechanism, both observations and interviews demonstrated multiple learning processes operating simultaneously. Interviewees described learning in four main areas. First, visitation stimulated '*reflective awareness'* of existing routines, prompting professionals to question certain practices. Second, physiotherapists reported '*learning through comparison*', particularly when observing or being observed by peer practices, which enabled discussing organisational choices and sharing best practices. The presence of an observing practice was widely valued and contributed to a culture shift from competition to collaboration:

"By seeing how another practice works, you automatically start reflecting on your own way of doing things." (O2 Observing practice)

"Practices used to see each other as competitors. Now they are more willing to learn from one another." (V2 Visitor)

Additionally, some respondents described their learning process as '*shifting from data collection for compliance towards using data for organisational development'*.

Finally, visitation fostered *normative learning* about what is considered legitimate or desirable professional behaviour within the SKF community. Importantly, these learning effects were uneven. Physiotherapists who were directly involved in preparation, dialogue and follow-up reported substantially more learning than those who were not involved.

"The visitor is familiar with the field [physiotherapy]. They have encountered these challenges themselves, which makes conversations easier and more open." (O1 Observing practice).

"The feedback was genuinely insightful. The visitor clearly identified the main bottleneck and pinpointed our key areas for improvement. He also offered strong, practical ideas on how to address them. He brought substantial experience, focusing on what truly matters rather than getting caught up in trivial details." (P6 Practice Owner).

Taken together, these findings suggest that peer visitation is implemented as intended, but that learning does not emerge automatically from participation. Instead, learning appears contingent on how visitation is enacted, interpreted and governed, and the role of the visitor is crucial.

Survey results

The survey was distributed to all participants of the SKF. A total of 589 respondents (estimated response rate 34%) completed the survey. To be able to distinguish between groups, respondents indicated their role in visitation: Physiotherapists (PT) n=279, Practice Owners (PO) n=207, Quality Officers (QO) n=82, Visitors (VIS) n=21. See appendix 2, table 4 for more details.

In the next section we summarize the survey results per domain according to Nardi et al. (2023). For detailed results on item-level and inferences on group differences, see appendix 2 table 5 and table 6.

Knowledge domain

Survey results show clear differences between respondent groups in their knowledge of the visitation process and its objectives. Physiotherapists reported significantly lower levels of knowledge compared with practice owners, quality officers and visitors, and showed greater variability in their responses. In contrast, practice owners, quality officers and visitors consistently reported high familiarity with the goals, phases and underlying quality policy of the visitation. Mean scores: PT: 2.90; PO 4.35; QO 4.63; VIS 4.56. Group differences between PTs and other groups (PO, QO, VIS) were statistically significant ($p<0.001$).

Attitude domain

Across all respondent groups, attitudes towards the visitation process were moderately to clearly positive. Practice owners, quality officers and visitors expressed stronger feelings of involvement and responsibility than physiotherapists, reflecting their more central role in organising and facilitating the visitation. Acceptance of formative indicators was generally higher than acceptance of summative indicators, particularly among physiotherapists. Mean scores attitude domain: PT 3.32; PO 3.81; QO 3.94; VIS 4.06. Group differences between PT's and other groups were statistically significant ($p<0.001$).

Behaviour domain

Reported behaviour related to data use varied substantially by role. Respondents reported frequent use of outcome data to support patient management at the individual patient level, including shared decision-making and evaluation of treatment outcomes. In contrast, the use of outcome data for benchmarking and quality improvement was much less common. This was particularly evident for comparisons of practice-level outcomes, either against national averages or with other physiotherapy practices. Mean scores were lowest among physiotherapists and only moderately higher among practice owners and quality officers (PT: 2.80; PO: 2.94; QO: 3.00; VIS: 3.20). Physiotherapists reported significantly lower use of benchmarking data than the other participant groups ($p = 0.045$).

Results domain

Perceived outcomes of the visitation also differed by role. Practice owners, quality officers and visitors reported clearer positive effects of the visitation on professional development, quality awareness and practice organisation than physiotherapists. Physiotherapists were more

reserved in their assessments, suggesting that experienced benefits are more visible at organisational and managerial levels than in day-to-day clinical practice. Mean scores: PT 2.90; PO 3.49; QO 3.56; VIS 4.10. Differences between PT's and other participant groups (PO, QO, VIS) were significant ($p<0.001$).

Preconditions domain

Regarding preconditions for visitation (time and effort), visitors were significantly more positive than practice owners and quality officers. Mean scores: PO 3.11; QO 3.19; VIS 3.73. ($p<0.001$).

Triangulation

Table 7 presents a joint display of findings by triangulating the qualitative interview analysis with document analysis, observations, and questionnaire results by looking for convergence, complementarity and divergence. Across all themes, we identified a design-to practice gap. The visitation programme is designed as a learning intervention but is often experienced and enacted as a control-oriented assessment process. Table 7 summarises the results.

Table 7 Joint Display Mixed Methods Results

Qualitative Theme	Interview Findings	Document Analysis	Observations	Survey Results	Meta-Inference
Data use between accountability and learning	Focus on summative indicators; limited reflective use of data for learning and improvement	Focus on compliance	Focus on summative indicators; limited discussion of learning from data.	Positive attitudes on documentation of process and outcome data, but the use of data for professional and organisational development was limited.	**Convergence** Data mainly used for accountability; learning function underdeveloped.
Quality culture and psychological safety	Importance of openness, feedback and staff involvement.	Focus on reflection and organisational development.	Psychological safety not always safeguarded; varying team involvement.	Limited involvement of physiotherapists.	**Complementarity** Visitation organised mainly at management level; limited frontline involvement.
Differentiation, tailoring and practice diversity	Need for tailoring based on practice maturity.	Process largely standardised.	Visitor roles and approaches varied substantially.	Conditions differed across stakeholder groups.	**Convergence** One-size-fits-all model insufficient; tailoring needed.
Learning through visitation: explicit and implicit mechanisms	Learning through reflection, comparison and peer exchange.	Learning and reflection are explicit aims of the programme.	Learning stronger when visitors acted as coach/analyst.	Benefits are more visible at organisational and managerial levels than in clinical practice.	**Complementarity** Learning occurs, but depends on involvement, visitor competencies and balance between formative/summative elements.

1. **Data use between accountability and learning**

This theme describes that the meaningful use of data for learning and quality improvement, e.g. comparing patient outcomes on specific conditions with benchmarks, was limited.

Document analysis shows that the visitation model explicitly combines summative and formative indicators aiming for learning and improvement. However, observations revealed a strong emphasis on summative indicators, leaving limited time for interpretation or reflective dialogue, challenging the ambition of SKF to contribute to a learning health system. The role of the visitor was crucial in this respect. Survey results showed that respondents across roles expressed broad support for the importance of careful documentation of process and outcome data, but the use of data for professional and organisational development was far less common.

2. **Quality culture and psychological safety**

This theme showed that staff involvement in visitation was not self-evident and that psychological safety was not always safeguarded. This theme was strengthened by observations and survey results. Practicing physiotherapists reported less knowledge of visitation, lower involvement, and less positive effects of the visitation compared to other participant groups. These results reveal conditions that are not explicitly operationalized in the formal visitation design.

3. **Differentiation, tailoring and practice diversity**

Interviews revealed that practices differ widely in maturity and experience with quality systems and respondents advocated for greater differentiation in visitation regarding time, effort, and support. Observations showed that visitations did not always align with the different learning needs of practices. Survey responses on the domain of preconditions confirmed that preparation time was widely experienced as intensive, reinforcing the need for proportional approaches. The formal visitation design did not account for practice variation e.g. regarding different learning needs. The same format was applied to different contexts.

4. **Learning through visitation: explicit and implicit mechanisms**

Although visitation was dominantly viewed as a control tool rather than a learning tool, this theme showed that visitation offers various learning opportunities depending on how visitation is enacted in practice. Learning from visitation often occurs implicitly at team or practice level, while individual clinicians may experience fewer direct or immediate benefits unless they are actively involved in visitation. Observations support this finding by emphasising the crucial role of the visitor who may support or hinder learning. Survey results support that learning through visitation was uneven among participant groups.

Research question 3: What improvements are needed to achieve SKF's learning ambitions?

The research team and SKF critically reflected on the study results and identified five actionable lessons for organisations implementing developmental peer visitation in primary care: (1) invest in visitor selection, training and calibration to reduce role drift toward control; : (2) protect psychological safety by separating staff interviews from managerial presence; (3) rebalance time allocation so formative dialogue is not crowded out by summative checks; (4) close the data feedback loop by reporting back to practices how data are interpreted, used and acted upon at community level; (5) tailor pathways to practice maturity, combining 'light' and 'supportive' variants

Discussion

This study shows that a developmental, peer-based visitation model can create learning opportunities for physiotherapy practices, but design – and implementation choices strongly determine whether visitation feels like audit or like learning. Four mechanisms were particularly influential: 1. the enacted role of the visitor, 2.the condition for psychological safety, 3. the balance between summative and formative indicators, and 4. the importance of feedback loops for learning health systems. We discuss these findings by comparing them to the existing literature on quality improvement and feedback interventions in healthcare.

(1) The enacted role of the visitor; coaching and analytical roles supported sensemaking and reflection, whereas controlling behaviours narrowed interaction to compliance. This finding extends audit-and-feedback literature: who delivers feedback and how matters as much as the

indicators themselves. Although the literature is scarce on visitor roles and their impact on learning, our findings resonate with research showing that feedback interventions are most effective when credible, dialogic and tailored to local context (Ivers et al., 2012).

(2) The condition of psychological safety. When staff interviews took place in the presence of practice owners, learning was inhibited and responses became defensive, confirming prior work on learning under evaluative pressure. Visitors adopting the 'assessor role' affect psychological safety, particularly in high-stakes evaluative conversations. (Edmondson, 1999; Edmondson & Bransby, 2023).

(3) The balance between summative and formative indicators. When summative indicators on data sampling dominate attention, organisations may optimise what is measured rather than what matters and therefore missing the opportunity to learn from data (Jamtvedt et al.,2019; Bevan & Hood, 2006). How visitors interpret and prioritise indicators shapes what practices are invited to learn from.

4) Learning was conditional on visible feedback loops. Without feedback from SKF on how aggregated data were used for knowledge development or professional positioning, practices struggled to perceive the added value of their data contributions, undermining motivation to learn (Wellington et al. 2022). The model's ambition to contribute to a learning health system depends on governance: learning systems need both 'guardrails' and space for bottom-up improvement, including transparent feedback loops to participating professionals and organisations (Friedman et al., 2024; Foy et al. 2025). Participants requested better SKF feedback on how data delivered by professionals on process and outcomes were aggregated and used for knowledge development and professional positioning, requiring explicit governance (Mc Donald et al. 2022).

Strengths and limitations

A key strength of this study is the methodological triangulation across documents, observations, interviews and the large survey. Limitations include potential selection bias in observed practices (6/19 consented) and potential social desirability in interviews. The survey mitigated some of this by including many staff respondents and allowing anonymity. Moreover, the role of SKF in this research project is suspect to bias regarding their interest in the outcomes. However, we discussed this issue in advance. We needed each other's expertise to make this research

project successful. We consciously limited the involvement of SKF in data analysis and triangulation, but we developed together recommendations for policy development.

Policy implications and future research

This study showed that peer-based visitation creates learning opportunities for physiotherapy practices, but design – and implementation choices strongly determine whether visitation feels like audit or like learning. Four mechanisms were particularly influential: 1. the enacted role of the visitor, 2.the condition for psychological safety, 3. the balance between summative and formative indicators, and 4. the importance of feedback loops for learning health systems.

Future studies should test whether the identified design levers (e.g., protected staff interviews, tailored visitation pathways, complete feedback loups) improve learning outcomes and reduce compliance-only behaviours. Comparative research across countries and professions would help clarify which mechanisms are context-dependent and which are transferable across governance regimes.

Conclusion

Peer-based visitation can support a shift from audit-oriented assurance to learning-oriented quality systems. To realise this potential, programme designers must actively invest in visitor selection and training, safeguard psychological safety, balance summative and formative quality indicators, and provide feedback loops that demonstrate how data are used to enable learning on a professional, organisational, and system level. These implementation lessons allow for the transfer to other primary care contexts seeking to shift from audit to learning.

Abbreviations

PTP = Physiotherapy Practice in Primary Care

SKF = Stichting Keurmerk Fysiotherapie

MM = Marjo Maas

MH = Michelle van t Hag

PW = Philip van der Wees

PT = Physiotherapist

PO = Practice Owner

QO = Quality Officer

VIS = Visitor

Declarations

The study was approved by the Medical Ethics Review Committee **METC Oost-Nederland**

(file no. 2024-17239). All participants provided written informed consent.

Availability of data and materials

Data and materials are available on request

Competing interests

There were no competing interests

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Authors contributions

All authors contributed to the study design. MM and MH contributed to data sampling and qualitative analysis. MM and PW contributed to quantitative analysis and meta-analysis. MM drafted the manuscript. All authors critically appraised the manuscript and approved the final version.

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